

Form PTO-1449 (modified)

Atty. Docket No.

Serial No.

99-826-A

09/769,169

List of Patents and Publications for Applicant's

Applicant

INFORMATION DISCLOSURE STATEMENT

William B. Busa

AUG 23 2001

(Use several sheets if necessary)

Filing Date:
January 24, 2001Group:
2171

U.S. Patent Documents

See Page 1

Foreign Patent Documents

See Page 2

Other Art

See Page 3

U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
	A1	5,021,220	06/04/1991	Mertens	424	1.1	08/17/1990
	A2	5,263,126	11/16/1993	Chang	395	51	09/10/1992
	A3	5,307,287	04/26/1994	Cramer, III et al.	364	496	06/17/1991
	A4	5,355,445	10/11/1994	Shibao et al.	395	.54	04/08/1992
	A5	5,418,943	05/23/1995	Borgida et al.	395	600	10/23/1991
	A6	5,418,944	05/23/1995	DiPace et al.	395	600	01/23/1992
	A7	5,434,796	07/18/1995	Weininger	364	496	06/30/1993
	A8	5,511,186	04/23/1996	Carhart et al.	395	600	11/18/1992
	A9	5,615,112	03/25/1997	Liu Sheng et al.	395	615	01/29/1993
	A10	5,657,255	08/12/1997	Fink et al.	364	578	04/14/1995
	A11	5,742,811	04/21/1998	Agrawal et al.	395	606	10/10/1995
	A12	5,751,605	05/12/1998	Hurst et al.	364	496	08/15/1996
	A13	5,806,060	09/08/1998	Borgida et al.	707	3	04/23/1997
	A14	5,808,918	09/15/1998	Fink et al.	364	578	06/25/1997
	A15	5,809,499	09/15/1998	Wong et al.	707	6	10/18/1996
	A16	5,819,266	10/06/1998	Agrawal et al.	707	6	03/03/1995
	A17	5,857,185	01/05/1999	Yamaura	707	5	09/13/1996
	A18	5,862,514	01/19/1999	Huse et al.	702	22	12/06/1996
	A19	5,867,118	02/02/1999	McCoy et al.	342	90	06/07/1995
	A20	5,873,080	02/16/1999	Coden et al.	707	3	03/26/1997
	A21	5,873,083	02/16/1999	Jones et al.	707	4	10/03/1997
	A22	5,892,838	04/06/1999	Brady	382	115	06/11/1996
	A23	5,901,069	05/04/1999	Agrafiotis et al.	364	528.03	08/01/1997

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

INFORMATION DISCLOSURE STATEMENT — PTO-1449 (MODIFIED)

Form PTO-1449 (modified)

Atty. Docket No.
99-826-ASerial No.
09/769,169

List of Patents and Publications for Applicant's

Applicant

William B. Busa

INFORMATION DISCLOSURE STATEMENT

Filing Date:
January 24, 2001Group:
2171

(Use several sheets if necessary)

U.S. Patent Documents

See Page 1

Foreign Patent Documents

See Page 2

Other Art

See Page 3

U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
	A24	5,914,891	06/22/1999	McAdams et al.	364	578	01/19/1996
	A25	5,940,817	08/17/1999	Kishi et al.	706	46	02/14/1992
	A26	5,950,192	09/07/1999	Moore et al.	707	3	06/26/1997
	A27	5,965,352	10/12/1999	Stoughton et al.	435	4	05/08/1998
	A28	5,966,712	10/12/1999	Sabatini et al.	707	104	05/15/1997
	A29	5,970,482	10/19/1999	Pham et al.	706	16	02/12/1996
	A30	5,970,500	10/19/1999	Sabatini et al.	707	104	05/15/1997
	A31	5,977,890	11/02/1999	Rigoutsos	341	55	02/13/1998
	A32	5,978,804	11/02/1999	Dietzman	707	10	04/10/1997
	A33	5,980,096	11/09/1999	Thalhammer-Reyero	364	578	01/17/1995
	A34	6,023,659	02/08/2000	Seilhamer et al.	702	19	03/06/1997
	A35	6,073,138	06/06/2000	de l'Etraz et al.	707	104	02/08/1999
	A36	6,081,620	06/27/2000	Anderholm	382	194	08/17/1999

Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
	B1	WO98/15825	04/16/1998	PCT	G01N	33/00	
	B2	WO99/05323	02/04/1999	PCT	C12Q	1/68	

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C1	Overbeek et al., "Representation of Function: The Next Step", Pub. On-line 01/31/97, www.mcs.anl.gov/compbio/publications/function_pap.html , pages 1-13.

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Form PTO-1449 (modified)

Atty. Docket No.

Serial No.

99-826-A

09/769,169

List of Patents and Publications for Applicant's

Applicant

William B. Busa

Filing Date:

Group:

January 24, 2001

2171

U.S. Patent Documents

See Page 1

Foreign Patent Documents

See Page 2

Other Art

See Page 3

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C2	Karp et al., "Representations of Metabolic Knowledge: Pathways", Artificial Intelligence Center, ISMB-94, pages 203-211.
	C3	Ogata et al., "KEGG: Kyoto Encyclopedia of Genes And Genomes", Institute for Chemical Research, Nucleic Acids Research, 1999, Vol. 27, No. 1, pages 29-34.
	C4	Heidtke et al., "BioSim – A New Qualitative Simulation Environment For Molecular Biology", Max-Planck-Institute For Molecular Genetics, ISMB-98, pages 85-94.
	C5	Igarashi et al., "Development Of A Cell Signaling Networks Database", Division of Chem-Bio Informations, National Institute Of Health Sciences, 1997, pages 187-197.
	C6	Goto et al., "Organizing And Computing Metabolic Pathway Data In Terms Of Binary Relations", Institute For Chemical Research, Kyoto University, 1997, pages 175-186.
	C7	Kraus et al., "Systems Analysis In Cell Biology: From The Phenomenological Description Towards A Computer Model Of The Intracellular Signal Transduction Network, Experientia 49 (1993) Birkhäuser Verlag, Ch-4010 Basel/Switzerland, pages 245-257.
	C8	Ogata et al., "Computation With The KEGG Pathway Database", Institute For Chemical Research, Kyoto University, BioSystems 47 (1998), pages 119-128.
	C9	Karp et al., "EcoCyc: Encyclopedia Of Escherichia Coli Genes And Metabolism", Nucleic Acids Research, 1998, Vol. 26, No. 1, pages 50-53.
	C10	Bono et al., "Reconstruction Of Amino Acid Biosynthesis Pathways From The Complete Genome Sequence", Institute For Chemical Research, Kyoto University, 1998 by Cold Spring Harbor Laboratory Press ISSN 1054-9803/98, pages 203-210.
	C11	Goto et al., "LIGAND Database For Enzymes, Compounds And Reactions", Institute For Chemical Research and Graduate School Of Agricultural Sciences, Kyoto University, 1999 Oxford University Press, Nucleic Acids Research, Vol. 27, No. 1, pages 377-379.
	C12	Goto et al., "LIGAND: Chemical Database For Enzyme Reactions", Institute For Chemical Research and Graduate School Of Agricultural Sciences, Kyoto University, Oxford University Press, Bioinformatics, Vol. 14, No. 7, 1998, pages 591-599.
	C13	Ermolaeva et al., "Data Management And Analysis For Gene Expression Arrays", Nature Genetics, Vol. 20, September 1998, pages 19-23.

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

INFORMATION DISCLOSURE STATEMENT — PTO-1449 (MODIFIED)

Form PTO-1449 (modified)		Atty. Docket No. 99-826-A	Serial No. 09/769,169
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant	
		William B. Busa	
		Filing Date: January 24, 2001	Group: 2171
U.S. Patent Documents <i>See Page 1</i>	Foreign Patent Documents <i>See Page 2</i>	Other Art <i>See Page 3</i>	

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C14	McGregor et al., "Pharmacophore Fingerprinting. 1. Application To QSAR And Focused Library Design", Affymax Research Institute, J. Chem. Inf. Comput. Sci. 1999, 39, pages 569-574.
	C15	Collins et al., "Driving Drug Discovery And Patient Therapy Via The Encapsulation And Fusion Of Knowledge", Momentum Healthcare Ltd, Pharmaceutical Sciences Research Institute, Drug Design And Discovery, 1999, Vol. 16, pages 181-194.
	C16	Mark Collins, "Empiricism Strikes Back: Neural Networks In Biotechnology", Bio/Technology, Vol. 11, February 1993, pages 163-166.
	C17	Hopfinger et al., "Extraction Of Pharmacophore Information From High-Throughput Screens", Current Opinion In Biotechnology, 2000, 11, pages 97-103.
	C18	Peter A. Hunt, "QSAR Using 2D Descriptors And TRIPoS' SIMCA", NRC Terlings Park, Journal Of Computer-Aided Molecular Design, 1999, 13, pages 453-467.
	C19	Schmalhofer et al., "Cooperative Knowledge Evolution: A Construction-Integration Approach To Knowledge Discovery In Medicine", German Research Center For Artificial Intelligence, Methods Of Information In Medicine, 1998, 37, pages 491-500.
	C20	Mars et al., "Knowledge Acquisition And Verification Tools For Medical Expert Systems", Med Decis Making, 1987, 7, pages 6-11.
	C21	Robinson et al., "Self-Organizing Molecular Field Analysis: A Tool For Structure-Activity Studies", Physical And Theoretical Chemistry Laboratory, Oxford University, J. Med. Chem., 1999, 42, pages 573-583.
	C22	Sung et al., "Evolutionary Optimization In Quantitative Structure-Activity Relationship: An Application Of Genetic Neural Networks", Department of Chemistry, Harvard University, J. Med. Chem., 1996, 39, pages 1521-1530.
	C23	Hans Matter, "Selecting Optimally Diverse Compounds From Structure Databases: A Validation Study Of Two-Dimensional And Three-Dimensional Molecular Descriptors", J. Med. Chem., 1997, 40, pages 1219-1229.
	C24	A. David Rodrigues, "Preclinical Drug Metabolism In The Age Of High-Throughput Screening: An Industrial Perspective", Pharmaceutical Research, Vol. 14, No. 11, 1997, pages 1504-1510.
	C25	Gorse et al., "Molecular Diversity And Its Analysis", DDT Vol. 4, No. 6, June 1999, pages 257-264.

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Form PTO-1449 (modified)		Atty. Docket No. 99-826-A	Serial No. 09/769,169
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT AUG 23 2001 (Use several sheets if necessary)		Applicant William B. Busa	
U.S. Patent Documents See Page 1		Filing Date: January 24, 2001	Group: 2171
		Other Art See Page 3	

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C26	Cramer et al., "Prospective Identification Of Biologically Active Structures By Topomer Shape Similarity Searching", Tripos, Inc. and Bristol-Myers Squibb, J. Med. Chem., 1999, 42, pages 3919-3933.
	C27	Manallack et al., "Neural Networks In Drug Discovery: Have They Lived Up To Their Promise?", Eur. J. Med. Chem., 34, 1999, pages 195-208.
	C28	The Knowledge Access Suite – Much More Then Just Data Mining, www.datamining.com/ka-suite.htm (various other articles attached all accessed at datamining.com).
	C29	Data Mining: An Introduction: Clementine-Working With Health Care, www.spss.com/cool/papers/clem_healthcare1.htm (other various downloads from this site).
	C30	Cognos Scenario, www.cognos.com/scenario/index.html .
	C31	Discover New Drugs, Discover Synt:em, www.syntem.com .
	C32	"DIVA Desktop Decision Support For Life Sciences Research For Windows 95, Windows 98, Windows NT", Oxford Molecular, 1999, pages 1-4.
	C33	Oxford Molecular – Solutions For Discovery Research, www.oxmol.com/software/diamond/background.shtml (various other articles from this site).
	C34	MDL Information Systems, Inc., www.mdli.com/cgi/dynamic/product.html?uid=\$uid&key=\$key&id=40 (various other articles from this site).
	C35	Tripos, Inc. Discovery Research, www.tripos.com/research/typapp.html . (various other articles from this site).
	C36	"Bionumerik Pharmaceuticals", Red Herring Magazine, www.rhventure.com/mag/issue67/news-feature-du99-bionum.html , pages 1-2.
	C37	"Chemistry And Biological Sciences", Silicon Graphics, Inc. (SGI), 2000, www.sgi.com/chembio/cust_success/bionumerik.html , pages 1-2.
	C38	"CS 267 Assignment One – Drug Design", garnet.berkeley.edu/~abeand/cs267/assignment1.html , pages 1-2.
	C39	"Cray And BioNumerik Pharmaceuticals: Engineering More Rapid Cures For Today's Diseases", www.cray.com/features/bionumerik.html , pages 1-3.

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

INFORMATION DISCLOSURE STATEMENT — PTO-1449 (MODIFIED)

Form PTO-1449 (modified)		Atty. Docket No. 99-826-A	Serial No. 09/769,169
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant	
		William B. Busa	
		Filing Date: January 24, 2001	Group: 2171
U.S. Patent Documents <i>See Page 1</i>		Foreign Patent Documents <i>See Page 2</i>	Other Art <i>See Page 3</i>

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

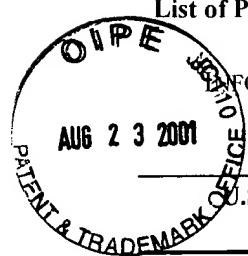
Exam. Init.	Ref. Des.	Citation
	C40	"BioNumerik Reports Preclinical Antitumor Data On Two Novel Supercomputer Engineered Anticancer Agents At 89 th Annual AACR Conference", www.prostatecancer.com/otherinfo/story2-aacs.html-ssi , pages 1-3.
	C41	"Agile Business Rule Processing", The Haley Enterprise, Inc., 1999, pages 1-9.
	C42	"Knowledge Management And Knowledge Automation Systems", Gallagher Financial System, Inc., pages 1-6.
	C43	Various pages from www.haley.com/4013219860515857/0000025120WhitePapers.html , etc.
	C44	Arbour Group, Software Specialists To The Pharmaceutical And Medical Device Industries, www.arbourgroup.com , (various other articles from this site).
	C45	Nanodesign – Partners In Drug Discover, EMD Facts-Evolutionary Molecular Design, www.nanodesign.com/EMD_facts.htm , (various other articles from this site).
	C46	BIOREASON – Automated Reasoning Systems For Drug Discovery, www.bioreason.com , (various other articles from this site).
	C47	Next Generation Software Tools For Early Drug Development, www.innaphase.com/pub/products.htm , (various other articles from this site).
	C48	LION Bioscience – Genomics, Informatics, Solutions, www.lion-ag.de , (various other articles from this site).
	C49	Inpharmatica – World-Class Bioinformatics, www.inpharmatica.co.uk , (various other articles from this site).
	C50	"Project Explorer: Enabling Knowledge-Led R & D Projects", Synomics, www.synomics.com/m/products/projectexplorer.htm , pages 1-3.
	C51	PharMatrix – Providing Information, Knowledge & Project Management Solutions For Pharmaceutical Discovery & Development, www.base4.com , (various other articles from this site).
	C52	Rowe et al., "Artificial Intelligence In Pharmaceutical Product Formulation: Neural Computing And Emerging Technologies", PSTT Vol. 1, No.5, August 1998, pages 200-205.
	C53	Rowe et al., "Artificial Intelligence In Pharmaceutical product Formulation: Knowledge-Based And Expert Systems", PSTT Vol. 1, No. 4, July 1998, pages 153-159.

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

INFORMATION DISCLOSURE STATEMENT — PTO-1449 (MODIFIED)



Form PTO-1449 (modified)		Atty. Docket No. 99-826-A	Serial No. 09/769,169
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT <small>(Use several sheets if necessary)</small>		Applicant	
		William B. Busa	
		Filing Date: January 24, 2001	Group: 2171
U.S. Patent Documents <i>See Page 1</i>		Foreign Patent Documents <i>See Page 2</i>	Other Art <i>See Page 3</i>

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C54	Wayne C. Guida, "Software For Structure-Based Drug Design", Current Opinion In Structural Biology, 1994, 4: 777-781.
	C55	"Bioinformatics, Pharmaceutical Informatics And Drug Discovery", www.basefour.com/what_is.html , pages 1-3.
	C56	Commercial Bioinformatics Software, www.uk.embnet.org/data/www/CCP11/commercial_software.txt.html , pages 1-12.
	C57	Hwa A. Lim, "Bioinformatics And Cheminformatics In The Drug Discovery Cycle", in:Lecture Notes In Computer Science #1278, 1997, pages 30-43.
	C58	Nathan Goodman, "The Fundamental Principles For Constructing A Successful Biological Laboratory Informatics System", pages 1-11.
	C59	Rebecca N. Lawrence, "Enhancing Information Sharing", DDT Vol. 4, No. 11, November 1999, pages 494-495.
	C60	Matthew Thorne, "InfoTech Pharma '98: Managing The Knowledge", DDT Vol. 3, No. 5, May 1998, pages 197-199.
	C61	Quinn et al., "Development Of Internet-Based Multimedia Applications", TiBS 24, August 1999, pages 1-4.
	C62	Watt et al., "Approaches To Higher-Throughput Pharmacokinetics (HTPK) In Drug Discovery", DDT Vol. 5, No. 1, January 2000, pages 17-24.
	C63	Craw et al., "Automated Knowledge Refinement For Rule-Based Formulation Expert System", PSTT Vol. 2, No. 9, September 1999, pages 383-385.
	C64	Steve Bottomley, "Bioinformatics – Value-added Databases", DDT. Vol. 4, No. 1, January 1999, pages 42-44, DDT. Vol. 4, No. 10, October 1999, pages 482-484.
	C65	Andrade et al., "Bioinformatics: From Genome Data To Biological Knowledge", Current Opinion In Biotechnology 1997, 8, pages 675-683.
	C66	Profiles Monitor, various articles, DDT. Vol. 3, No. 11, November 1998, pages 525-527.
	C67	Monitor, various articles, DDT Vol. 3, No. 9, September 1998, pages 426-428..
	C68	Peter Murray-Rust, "Bioinformatics And Drug Discovery", Current Opinion In Biotechnology, 1994, 5:648-653.

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

INFORMATION DISCLOSURE STATEMENT — PTO-1449 (MODIFIED)